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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,204	02/26/2002	Takuro Sekiya	220103US2	8688
22850	7590	11/03/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MENEFE, JAMES A	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

10/085,204.

Applicant(s)

SEKIYA ET AL.

Examiner

James A. Menefee

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 October 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attached.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: 1-5.

Claim(s) rejected: 6-8.

Claim(s) withdrawn from consideration: 9-62.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____.

ATTACHMENT TO ADVISORY ACTION

As an initial matter, the amendment raises a new issue that requires further consideration: each of claims 6, 24, 38, 41, 44, 47, and 50 as amended include the phrase “substantially uniform as a compositional uniform as a compositional gradation layer thickness increase.” The underlined terms appear to have been added by mistake and should be deleted, as the phrase doesn’t make sense to the examiner with these words. If the examiner is mistaken then further clarification should be added explaining why this is not a typographical error.

The amendment to claim 6 may be presumed to clarify the claimed invention such that it is no longer indefinite; it is now clear which thickness the applicant is claiming. However, the examiner contends that the equation is still inconsistent with the disclosure, and the claim cannot be allowed with the present equation.

The examiner reiterates the arguments from pages 6-7 of the Final Rejection. The claimed equation does not properly convey the intended meaning of the applicant’s invention. Table 2 on page 85 clearly shows the applicant’s intention is for 1.1 μm wavelength to correspond to 40 nm thickness, for 1.3 μm to correspond to 50 nm, and so on. Page 85 lines 20-21 clearly state that the thickness and wavelength are to be in nanometers. This is now correct in the claim. Converting to nanometers, the wavelengths of Table 2 become 1100 nm, 1300 nm, 1500 nm, and 1700 nm. Plugging into the equation gives:

$$50 \times 1100 - 15 = 55000 - 15 = 54985 \text{ nm thickness}$$

$$50 \times 1300 - 15 = 65000 - 15 = 64985 \text{ nm thickness}$$

$$50 \times 1500 - 15 = 75000 - 15 = 74985 \text{ nm thickness}$$

$$50 \times 1700 - 15 = 85000 - 15 = 84985 \text{ nm thickness}$$

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These thicknesses are one thousand times the intended thicknesses listed in Table 2. This result is clearly inconsistent with the disclosure. Thus it is proposed that to correctly claim the invention applicant must change the equation to:

$$0.05 \lambda - 15$$

If the equation is changed as such, then 1.1 μm wavelength will correspond to 40 nm thickness, 1.3 μm wavelength will correspond to 50 nm thickness, and so on, and thus the claim would properly correspond to the disclosure as in Table 2.

This equation should be changed in both the claims and in the specification. This will not be deemed new matter because it is a clarification of a clear mathematical error; one skilled in the art would recognize that the equation is just incorrect.

If the applicant still insists that the equation is to be as currently claimed and as in specification page 85, then applicant is requested to point out support in the specification for this. The examiner finds no disclosure that the thicknesses should be on the order of 55000 nm. In order for the equation to provide for thicknesses more in line with what is disclosed, i.e. on the order of 55 nm, the equation in both the specification and the claims should be changed to that suggested above.

The amendment to claim 1 would make claim 1 allowable. Thus claims 18, 37, 40, 43, 46, and 49, and all their dependent claims, would also be allowable because claim 1 is generic.

The additional limitations regarding uniform compositional gradation layer thickness would make claim 6 allowable over Ohiso, similarly to claim 1. If claim 6 is remedied to fix the equation and thus be allowable, applicant is reminded to also amend claims 24, 38, 41, 44, 47,

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and 50 so that claim 6 is still generic to these claims. If claim 6 is allowed then these claims and any dependent claims will be allowed.

If claims 1 and 6 become allowable, claims 9-17, 28-36, 39, 42, 45, 48, and 51-62 will be cancelled. Claims 1 and 6 are not generic to these claims. These claims are withdrawn as non-elected without traverse.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (571) 272-1944. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JM
October 29, 2004



MINSUN OH HARVEY
PRIMARY EXAMINER